

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FR2004/000029	International filing date (day/month/year) 08.01.2004	Priority date (day/month/year) 08.01.2003
International Patent Classification (IPC) or national classification and IPC B65H20/24		
Applicant KOMORI-CHAMBON SA		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of _____ sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersedes earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table><tr><td><input checked="" type="checkbox"/></td><td>Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/></td><td>Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/></td><td>Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VIII</td><td>Certain observations on the international application</td></tr></table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/ EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/000029

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on:

- ☐ the international application in the language in which it was filed
- ☐ the translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rule 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-18 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages 1-19 _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages 1/5-5/5 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV

Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
- ☐ restricted the claims
 - ☐ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☒ neither restricted the claims nor paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with
 - ☒ not complied with for the following reasons:

See separate sheet

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☐ all parts
- ☒ the parts relating to claims Nos. 1-10

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/000029

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	6-10	YES
	Claims	1-5	NO
Inventive step (IS)	Claims	6-10	YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. The present notification makes reference to the following document:			
D1: EP 1 026 111 A (PRITTIE ALLAN R) 9 August 2000 (2000-08-09)			
2. INDEPENDENT CLAIM 1			
2.1 The present application does not meet the requirements of PCT Article 33(1), since the subject matter of claim 1 does not comply with the criterion of novelty defined by PCT Article 33(2).			
Document D1 describes, as mentioned above, all the technical features mentioned in document D1. Moreover, D1 discloses all the technical features mentioned in claims 2-5 .			
However, the subject matter of claims 6-10 appears to be novel, is considered to involve an inventive step and is industrially applicable.			

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box IV:

The different inventions/groups of inventions are as follows:

Claims 1-17

Apparatus for shaping a web of flexible material, comprising at least one feed roller suitable for feeding the web continuously according to a given speed and motion equation, a shaping roller which is associated with a mating roller suitable for shaping the web over at least a portion of its circumference, said shaping roller consisting of a support roller which has at least one replaceable shaping element attached to the outer surface thereof and which rotates in accordance with a given speed and motion equation; the apparatus incorporating, between the feed roller and the shaping roller, a control unit with take-up means suitable for controlling the movement and speed of the web upstream of the shaping roller, and having at least one movable guide element suitable for positively guiding at least one web buffer loop formed between the rollers, the movement of said guide element being controlled according to a set equation,

said equation governing the motion of the movable guide element being a function of the equation governing the motion of the feed roller and of the equation governing

Supplemental Box

the motion of the take-up means, which in turn is a function of the equation governing the motion of the shaping roller,

the take-up means consisting of at least one roller,

and of the movable guide element, which is a rotating roller about which the web is wound; with at least one rotating roller, with a circumferential speed greater than the speed of the web, arranged between the shaping roller and the guide roller,

the guide element consisting of a rotating roller about which the web is wound,

characterised in that the guide element consists of a non-rotatable portion about which the web is wound.

Claims 1, 11-18

Apparatus for shaping a web of flexible material, comprising at least one feed roller suitable for feeding the web continuously according to a given speed and motion equation, a shaping roller which is associated with a mating roller suitable for shaping the web over at least a portion of its circumference, said shaping roller consisting of a support roller which has at least one replaceable shaping element attached to the outer surface thereof and which rotates in accordance with a given speed and motion equation; the apparatus incorporating, between the feed roller and the shaping roller, a control

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unit with take-up means suitable for controlling the movement and speed of the web upstream of the shaping roller, and having at least one movable guide element suitable for positively guiding at least one web buffer loop formed between the rollers, the movement of said guide element being controlled according to a set equation,

characterised in that the movement of the guide element follows a circular path.

Claims 1 and 19

Apparatus for shaping a web of flexible material, comprising at least one feed roller suitable for feeding the web continuously according to a given speed and motion equation, a shaping roller which is associated with a mating roller suitable for shaping the web over at least a portion of its circumference, said shaping roller consisting of a support roller which has at least one replaceable shaping element attached to the outer surface thereof and which rotates in accordance with a given speed and motion equation; the apparatus incorporating, between the feed roller and the shaping roller, a control unit with take-up means suitable for controlling the movement and speed of the web upstream of the shaping roller, and having at least one movable guide element suitable for positively guiding at least one web buffer loop formed between the rollers, the movement of said guide element being controlled according to a set equation,

Supplemental Box

characterised in that it has means suitable for detecting a recurring mark on the web, comparing said mark with a shaping roller position reference and, depending on the result of the comparison, adjusting the position of the web in relation to the shaping roller.

REASONS FOR THE OBJECTION RELATING TO LACK OF UNITY:

The International Searching Authority has determined that the present international application does not comply with the rule of unity of invention, as set forth in the guidelines, for the reasons given below.

The present report makes reference to the following document. The numbering given below will be used throughout the rest of the report:

D1 = EP 1 026 111

Invention n° 1

1. As claimed in claims 1-5, document D1 describes

an apparatus (see the rollers (1)) for shaping a web (3) of flexible material, comprising at least one feed roller (12) suitable for feeding the web continuously according to a given speed and motion equation (since said roller is driven, the web can be considered for this reason to follow a given speed and motion equation), a shaping roller (see the upper roller (1)) which is associated

Supplemental Box

with a mating roller (see the lower roller (1)) suitable for shaping the web (3) over at least a portion of its circumference, said shaping roller (1) consisting of a support roller which has at least one replaceable shaping element (1) attached to the outer surface thereof and which rotates in accordance with a given speed and motion equation (said roller is driven); the apparatus incorporating, between the feed roller (12) and the shaping roller (1), a control unit (8, 9, 10) with take-up means suitable for controlling the motion and speed of the web upstream of the shaping roller (1), and having at least one movable guide element (8) suitable for positively guiding at least one web buffer loop (3) formed between the rollers, the movement of the guide element being controlled according to a set equation (see D1, passages 0032-0037) (cf. claim 1),

- said equation governing the motion of the movable guide element being a function of the equation governing the motion of the feed roller and of the equation governing the motion of the take-up means, which in turn is a function of the equation governing the motion of the shaping roller (said passages 0032-0037 of D1 describe the interconnection between the speeds and the control thereof via, inter alia, a servomotor) (cf. claim 2),

- said take-up means consisting of at least one roller (8) (cf. claim 3)

- and of the movable guide element, which is a rotating roller about which the web is wound, with at least one rotating roller, with a circumferential speed greater

Supplemental Box

than the speed of the web, arranged between the shaping roller (1) and the guide roller (13) (cf. claim 4),

- the guide element consisting of a rotating roller (13) about which the web is wound.

1.1 Consequently, a first invention can be seen in the following special technical features as claimed in claim 6:

the guide element consists of a non-rotatable part about which the web is wound.

1.2 The contribution of said special features to an improvement of the prior art is as follows:

The problem of providing a low-cost and/or more wear- and/or pollution-resistant guide element is solved by the above special technical features.

Invention n° 2

2. As mentioned above, D1 describes all the special features claimed in claim 1.

2.1 Consequently, a second invention can be seen in the following special technical features, as claimed in claim 11:

the movement of the guide element follows a circular path.

Supplemental Box

2.2 The contribution of said special features to an improvement of the prior art is as follows:

The problem of providing an alternative solution using less space is solved by the above special technical features.

Invention n° 3

3. As mentioned above, D1 describes all the special features claimed in claim 1.

3.1 Consequently, a second invention can be seen in the following special technical features, as claimed in claim 19:

Means suitable for detecting a recurring mark on the web, comparing the position thereof with a shaping roller position reference and, on the basis of said comparison, adjusting the position of the web relative to the shaping roller are provided.

3.2 The contribution of said special features to an improvement of the prior art is as follows:

The problem of automatically adjusting the position of the web relative to the shaping roller is solved by the above special technical features.

4. There does not appear to be a technical relationship among these three inventions, derived from said special features.

Supplemental Box

Consequently, it is considered that, in so far as Rule 13.1 is not met, the various inventions or plurality of inventions below are not so linked as to form a single inventive concept.

5. Pursuant to PCT Article 17.3(a) and Rule 33.3, the International Searching Authority has established the international search report for the subject matter mentioned in the paragraph entitled "Invention n° 1" (PCT Guidelines, VII, 12), and no search has been carried out for the subject matter under "Invention n° 2, Invention n° 3" (PCT Guidelines, IV, 2.8).